



## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

<b>(51) International Patent Classification <sup>6</sup> :</b> <b>C08L 7/02, C08J 5/18, C05F 17/02</b>	<b>A1</b>	<b>(11) International Publication Number:</b> <b>WO 99/48969</b> <b>(43) International Publication Date:</b> 30 September 1999 (30.09.99)
<b>(21) International Application Number:</b> PCT/EP99/02053 <b>(22) International Filing Date:</b> 18 March 1999 (18.03.99)  <b>(30) Priority Data:</b> 10-078743 26 March 1998 (26.03.98) JP  <b>(71) Applicant (for all designated States except US):</b> ELF ATOCHEM S.A. [FR/FR]; 4/8, cours Michelet, F-92080 Puteaux (FR).  <b>(72) Inventors; and</b> <b>(75) Inventors/Applicants (for US only):</b> ISHINO, Kiyotaka [JP/JP]; Elf Atochem Japan Kyoto Technical Center, Science Center Building 3, Kyoto Research Park, 1 Chudoji Awato-cho, Shimogyo-ku, Kyoto-shi, Kyoto-fu, Kyoto 600 (JP). KURATSUJI, Takatoshi [JP/JP]; Elf Atochem Japan Kyoto Technical Center, Science Center Building 3, Kyoto Research Park, 1 Chudoji Awato-cho, Shimogyo-ku, Kyoto-shi, Kyoto-fu, Kyoto 600 (JP). YAMAMOTO, Jun [JP/JP]; Elf Atochem Japan Kyoto Technical Center, Science Center Building 3, Kyoto Research Park, 1 Chudoji Awato-cho, Shimogyo-ku, Kyoto-shi, Kyoto-fu, Kyoto 600 (JP). IKETAKI, Takashi [JP/JP]; Nishi 2-7, Inada-cho, Obihiro-shi, Hokkaido (JP).	<b>(74) Agent:</b> NEEL, Henry; ELF Atochem S.A., Dept. Propriété Industrielle, Cours Michelet - La Défense 10, F-92091 Paris La Défense Cedex (FR).  <b>(81) Designated States:</b> AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).  <b>Published</b> <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>	
<b>(54) Title:</b> FILM FOR ACCELERATED COMPOST FERMENTATION  <b>(57) Abstract</b>  Objective: the objective of the present invention lies in shortening the compost preparation period by a simple method and preventing contamination of underground water. Constitution: film for accelerated compost fermentation which is characterized in that it comprises a composition in which the chief component is polymer containing polyether chains as structural units, and where the water vapour permeability thereof is at least 300 g/m <sup>2</sup> .24h, the oxygen permeability is at least 1,000 cm <sup>3</sup> /m <sup>2</sup> .24h.atm and the carbon dioxide permeability is at least 10,000 cm <sup>3</sup> /m <sup>2</sup> .24h.atm; together with film for accelerated compost fermentation which is characterized in that the aforesaid film is reinforced by means of a nonwoven material or net.		

# PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>AM7073-HN/fo</b>	<b>FOR FURTHER ACTION</b> see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. <b>PCT/EP 99/ 02053</b>	International filing date (day/month/year) <b>18/03/1999</b>	(Earliest) Priority Date (day/month/year) <b>26/03/1998</b>
Applicant  <b>ELF ATOCHEM S.A.</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 3 sheets.



It is also accompanied by a copy of each prior art document cited in this report.

### 1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.



the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :



contained in the international application in written form.



filed together with the international application in computer readable form.



furnished subsequently to this Authority in written form.



furnished subsequently to this Authority in computer readable form.



the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.



the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

### 4. With regard to the title,



the text is approved as submitted by the applicant.



the text has been established by this Authority to read as follows:

### 5. With regard to the abstract,



the text is approved as submitted by the applicant.



the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

### 6. The figure of the **drawings** to be published with the abstract is Figure No.



as suggested by the applicant.



because the applicant failed to suggest a figure.



because this figure better characterizes the invention.

---



None of the figures.

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 6 C08L71/02 C08J5/18 C05F17/02

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 6 C08L C08J C08G C05F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 660 887 A (NUSSBAUMER WALTER ET AL) 26 August 1997 (1997-08-26) claim 1 column 3, line 32 ---	1-3
X	KAPLAN W A ET AL: "THE EFFECT OF POLYMER STRUCTURE ON THE GAS PERMEABILITY OF MODEL POLYURETHANES" JOURNAL OF CELLULAR PLASTICS, vol. 30, no. 3, 1 May 1994 (1994-05-01), pages 242-272, XP000443643 ISSN: 0021-955X tables 2A,B ---	1,2
X	EP 0 378 015 A (ATOCHEM ELF SA) 18 July 1990 (1990-07-18) claim 1 --- -/--	1,2

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

## \* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*&\* document member of the same patent family

Date of the actual completion of the international search

22 July 1999

Date of mailing of the international search report

12. 08. 1999

Name and mailing address of the ISA  
European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

O'Sullivan, T

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 44 40 837 A (BASF AG) 23 May 1996 (1996-05-23) claim 1 page 8, line 65 - line 66 ---	1,2
A	US 3 895 916 A (ROSNER KURT) 22 July 1975 (1975-07-22) figures 1-4 -----	1-3

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 99/02053

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5660887	A	26-08-1997	DE 4121716 A	14-01-1993
			US 5883217 A	16-03-1999
			AT 179450 T	15-05-1999
			CA 2072839 A	02-01-1993
			DE 4143454 C	05-01-1995
			DE 59209682 D	02-06-1999
			EP 0522321 A	13-01-1993
			JP 5209162 A	20-08-1993
			MX 9203828 A	01-03-1993
			US 5869593 A	09-02-1999
			US 5851661 A	22-12-1998
			US 5508371 A	16-04-1996
-----				
EP 0378015	A	18-07-1990	FR 2639644 A	01-06-1990
			AT 117333 T	15-02-1995
			AU 627523 B	27-08-1992
			AU 4547889 A	31-05-1990
			CA 2003489 A,C	25-05-1990
			CN 1042926 A,B	13-06-1990
			CN 1096308 A,B	14-12-1994
			DE 68920724 D	02-03-1995
			DE 68920724 T	24-08-1995
			DK 591289 A	26-05-1990
			ES 2066872 T	16-03-1995
			FI 99130 B	30-06-1997
			GR 3015515 T	30-06-1995
			HK 177795 A	01-12-1995
			IE 70669 B	11-12-1996
			IL 92304 A	25-01-1994
			JP 2199131 A	07-08-1990
			JP 2572135 B	16-01-1997
			KR 9311366 B	04-12-1993
			NO 305321 B	10-05-1999
			PT 92402 A,B	31-05-1990
			US 5506024 A	09-04-1996
-----				
DE 4440837	A	23-05-1996	AU 691317 B	14-05-1998
			AU 2978195 A	06-06-1996
			CA 2205072 A	23-05-1996
			CN 1170419 A	14-01-1998
			CZ 9701465 A	15-10-1997
			WO 9615174 A	23-05-1996
			EP 0792310 A	03-09-1997
			FI 972060 A	14-05-1997
			HU 77057 A	02-03-1998
			JP 11500468 T	12-01-1999
			NO 972227 A	14-07-1997
			NZ 289823 A	26-06-1998
			PL 320223 A	15-09-1997
-----				
US 3895916	A	22-07-1975	AT 319287 B	10-12-1974
			AU 5599173 A	28-11-1974
			BE 799009 A	31-08-1973
			CA 976779 A	28-10-1975
			CH 587202 A	29-04-1977
			DE 2226729 A	13-12-1973
			FR 2186405 A	11-01-1974
			GB 1381848 A	29-01-1975

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP 99/02053

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 3895916 A		JP 1005335 C	24-07-1980
		JP 49084857 A	14-08-1974
		JP 54037230 B	14-11-1979
		NL 7306629 A,C	04-12-1973
-----			